

549, 657

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number
WO 2004/082519 A2

- (51) International Patent Classification⁷: **A61F**
- (21) International Application Number:
PCT/GB2004/001067
- (22) International Filing Date: 12 March 2004 (12.03.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0306434.2 20 March 2003 (20.03.2003) GB
- (71) Applicant (for all designated States except US): **CHAS A. BLATCHFORD & SONS LIMITED** [GB/GB]; Lister Road, Basingstoke, Hampshire RG22 4AH (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **LANG, Steven** [GB/GB]; 31 Highmead, Fareham, Hampshire PO15 6BK (GB).
- (74) Agents: **BLATCHFORD, William, Michael et al.**; Withers & Rogers, Goldings House, 2 Hays Lane, London SE1 2HW (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

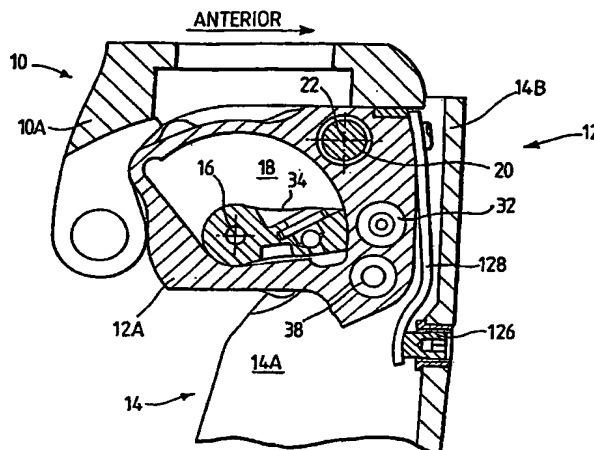
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROSTHETIC KNEE JOINT MECHANISM



(57) Abstract: A prosthetic knee joint mechanism has an hydraulic load-activated knee-stabilizing device for resisting joint flexion. A rotary piston (34) connected to one part of the mechanism is rotatable within a fluid-filled fluid displacement chamber (18) associated with another part of the mechanism to drive fluid through a fluid passage which contains a main valve (38) which restricts or allows joint flexion according to the position of a valve member within the valve. The valve member is movable towards an open position in response to fluid pressure in the fluid passage upstream of the valve member caused by application of a flexion torque to the knee joint mechanism, movement of the valve member in the direction of the open position being at least resisted by a valve control arrangement actuated by application of the wearer's weight. The weight-responsive valve control arrangement is preferably a weight-responsive pilot valve (32) for hydraulically resisting movement of the valve member of the main valve.

WO 2004/082519 A2